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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,447

09/22/2003

Bruce Pedersen

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12/17/2004

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EXAMINER

LUU, AN T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/668,447

Applicant(s)

BRUCE PEDERSON

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 8, 14, 16 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-5, 7, 9-13, 15 and 17-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-8-04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6, 8, 16 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by the Fahrenbruch reference (U. S. Patent 6,282,253).

Fahrenbruch discloses in figure 2A an apparatus for aligning a periodic input signal REFCLK with a delay signal (output of 52), the apparatus comprising a phase detector 54 having a first input coupled to the periodic input signal; an adjustable delay circuit (48 & 52) coupled to an output of the phase detector (by means of 50) that generates the delay signal 26 at an output of the adjustable delay circuit; a feedback loop circuit 26 coupled to the output of the adjustable delay circuit; an edge detector circuit 44 having an input coupled to the output of the adjustable delay circuit (via 48 and 52); and a multiplexer 42 having data inputs coupled to the feedback loop and the periodic input signal, a select input coupled to receive a detect signal (output of 44) from the edge detector circuit, and an output coupled to an input of the adjustable delay circuit (via 46) as required by claim 8.

As to claim 16, the scope of claim is similar to that of claim 8. Therefore, it is rejected for the same reason set forth above.

As to claim 1, it is rejected for reciting a method/step derived from an apparatus of claim 1 which is rejected as noted above.

As to claim 6, control 50 (including its description in col. 5, lines 45-47) is for increasing the delay of the selection signal through an adjustable delay circuit (48, 52) when the phase detection signal indicates that an edge of the delay signal is ahead of a corresponding edge of the input signal; and decreasing the delay of the selection signal through the adjustable delay circuit when the phase detection signal indicates that an edge of the delay signal is behind a corresponding edge of the input signal.

As to claim 22, Fahrenbruch discloses in figure 6 and its description in col. 9 and 10 that the inventive apparatus is used in part of a field programmable gate array (i.e., RAM, ROM).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Fahrenbruch reference (U. S. Patent 6,282,253).

Fahrenbruch discloses all the claim invention except for teaching a delay line having an odd number of series connected buffer. However, it is well known in the art that a delay line is configured by an odd number of series connected buffers. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to replace a generic delay in Fahrenbruch with a specific one having an odd number of series connected buffers since an odd number of series connected buffers is capable of providing multiple tap outputs suitable for

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various timing as required by a particular application. Due to breakdown in Patent Retrieving System at the moment, Examiner cannot provide a proof (i.e., U.S. Patent) showing a delay/variable delay having an odd number of series connected buffers. One will be provided as requested.

### ***Allowable Subject Matter***

5. Claims 2-5, 7, 9-13, 15 and 11-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus and method thereof comprising elements being configured as recited in claims. Specifically, none of the prior art teaches or fairly suggests, among other things, the following limitations:

- A *divider* as required by claims 9, 17 and 2.
- A *logic gate* as required by claims 7, 13 and 19.
- A *feedback loop* and the *edge-detector* circuit as required by claims 5, 15 and 21.
- Means for detecting the edges of the delay signal count falling edges of the delay signal as required by claim 20

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu  
12-11-04 *AL*

  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
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